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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/964,690	09/28/2001	Li-Lien Lee	146712002600	2930

25227 7590 05/06/2003  
MORRISON & FOERSTER LLP  
1650 TYSONS BOULEVARD  
SUITE 300  
MCLEAN, VA 22102

EXAMINER

RICKMAN, HOLLY C

ART UNIT	PAPER NUMBER
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1773

DATE MAILED: 05/06/2003

7

Please find below and/or attached an Office communication concerning this application or proceeding.

AS-7

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/964,690	LEE ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Holly C. Rickman	1773	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 February 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-9 and 11-16, 18-20 is/are rejected.
- 7) ☒ Claim(s) 6, 10 and 17 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The rejection of claims 1-3, 5-6, 9, 12-14, and 16-18 under 35 U.S.C. 102(e) as being anticipated by Futamoto et al. (US 6383667) is withdrawn in view of Applicant's amendments.

***Claim Rejections - 35 USC § 102/103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The rejection of claims 10-11 and 20 under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Futamoto et al. (US 6383667) is withdrawn in view of Applicant's amendments.

***Claim Rejections - 35 USC § 103***

4. Claims 1-5, 7-9, 11-16, and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bian et al. (US 6174582) in view of Ohkubo et al. (US 5851628).

Bian et al. disclose a magnetic recording medium having a seedlayer formed from Nb and containing nitrogen. The reference teaches that the seedlayer is sputtered in an atmosphere containing N and may have a N concentration of 10-50 at % (col. 4, lines 57-60; col. 5, lines 22-49). Bian et al. teach that the thickness of the seedlayer is not believed to be critical and a range

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of 5-30 nm is given as guidance. Thus, the reference fails to disclose an embodiment of the invention having a seedlayer 1-40 Å in thickness. However, it is noted that the reference does state that the “thicknesses of the layers are not believed to be critical for practicing the invention, but the following ranges are given as guidance. The seed layer is preferably from about 5 to 30 nm thick.” See column 4, lines 57-60. Thus, values of “*about*” 5 nm or 50 Å are within the scope of the invention. It is the Examiner’s contention that the claimed range of about 1 to *about* 40 Å overlaps the claimed end point of “about 5 nm.”

Ohkubo et al. teaches that it is known in the art that the thickness of a seedlayer affects the coercivity of a magnetic recording medium (Fig. 18).

It would have been obvious to one of ordinary skill in the art at the time of invention to determine the optimal thickness of the Nb seedlayer taught by Bian et al. in order to obtain the desired coercivity. It has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

#### ***Allowable Subject Matter***

5. Claims 6, 10, and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Bian et al. fail to teach or suggest a magnetic recording medium having a coercivity within the ranges set forth in claim 10. Furthermore, the reference fails to teach or suggest a motivation to optimize the niobium:metal ratio in the seedlayer.

*Response to Arguments*

6. Applicant's arguments filed 2/21/03 have been fully considered but they are not persuasive with respect to the rejection of the claims in view of Bian et al.

Applicant argues that the examiner's reliance on In re Boesch is misplaced in the present context. Applicant argues that In In re Boesch, composition requirements in appellants' claims overlapped with requirements found in the prior art. Applicant argues there is no overlap in the instant case. The examiner respectfully disagrees. The prior art states a preferred minimum of "about 5 nm" and the present claims state a maximum of "about 40 Å." When given their broadest reasonable interpretation, it is the examiner's position that one of ordinary skill in the art would expect that values of about 50 Å and about 40 Å would overlap. Therefore, given the teaching by Ohkubo et al. that it is known in the art that the thickness of a seedlayer affects the coercivity of a magnetic recording medium, it would have been well within the purview of one of ordinary skill in the art at the time of invention to determine the optimal seedlayer thickness from within the disclosed range.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Holly Rickman whose telephone number is (703) 305-2642. The examiner can normally be reached on Monday-Friday 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Thibodeau can be reached on (703) 308-2367. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

A handwritten signature in black ink, appearing to read "Holly Rickman". The signature is fluid and cursive, with the first name "Holly" being more prominent than the last name "Rickman".

Holly Rickman  
Primary Examiner  
Art Unit 1773

hcr  
May 5, 2003